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(54) Title of Invention: METHOD FOR MANUFACTURING OHMIC ELECTRODE
OF COMPOUND SEMICONDUCTOR DEVICE USING
SELECTIVE RE-GROWTH

PURPOSE: A method for manufacturing an HEMT (High Electron Mobility Transistor) using a selective re-growth is provided to lower an ohmic contact resistance by diffusing a Ge of an AuGe/Ni/Au ohmic metal layer to an InGaAs channel layer.

CONSTITUTION: An etching mask pattern is formed on the first ohmic layer. A buffer layer (22) is exposed by etching the first ohmic layer, a short key layer (26), a spacer layer (25), and a channel layer (24). The second ohmic layer is grown on an etched portion of the buffer layer (22) by using an MOCVD (Metal Organic Chemical Vapor Deposition) method until a height of the second ohmic layer corresponds to a height of the first ohmic layer. An ohmic metal layer is formed on parts of the first and the second ohmic layers. A gate electrode layer is formed to be contacted with the short key layer (26).